

QUT Digital Repository:
<http://eprints.qut.edu.au/>



This is the accepted version of this conference paper:

Hanis, Muhammad Hasbi and Trigunarsyah, Bambang and Susilawati, Connie (2010) *Elements of public asset management framework for local governments in developing countries*. In: 8th International Conference on Construction and Real Estate Management (ICCREM 2010), 1-3 Desember 2010, Royal on the Park Hotel, Brisbane.

© Copyright 2010 Please consult the authors.

Elements of Public Asset Management Framework for Local Governments in Developing Countries

HANIS Muhammad Hasbi¹ TRIGUNARSYAH Bambang² SUSILAWATI Connie³

Abstract: There is a widespread recognition to the need of better manage municipal property in most cities in the world. Structural problems across regional, state, and territorial governments that have legal powers to own and maintain real property are similar, regardless of the level of development of each country. Start from a very basic level of property inventory records. The need for better manage to the local government owned property is the result of widespread decentralisation initiatives that often have devolved huge property portfolios from central to local governments almost “overnight”. At the same time municipal or regional governments were and continue to be unprepared to deal with multiple issues related to the role of property owners and managers. The lack of discussion of public asset management especially the elements that should be incorporated in the framework creates an important challenge to study the discipline of public asset management further.

The aim of this paper is to study the practices of public asset management in developed countries, especially the elements of public asset management framework, and its transferability to developing countries. A case study was selected and conducted to achieve this aim. They involved interviews and a focus group. The study found that in public asset management framework, proper asset identification, public asset needs analysis, asset life cycle and performance measurements are an important element that should be incorporated in the framework. Those elements are transferable and applicable to developing countries’ local governments. Finally, findings from this study provide useful input for the local government policy makers, scholars and asset management practitioners to establish a public asset management framework toward more efficient and effective local governments in managing their assets as well as increasing public services quality.

Key words: Public asset management, local government, municipal assets, asset lifecycle, needs analysis, performance measurement.

1. INTRODUCTION

The importance of public asset management framework for local governments has been recognised and realised worldwide. Although it is important, its application is not always simple. There are many problems related to the public asset management. Structural problems across regional, state, and territorial governments that have legal powers to own and maintain real property are similar, regardless of the level of development of each country. They start from a very basic level of property inventory records to complicated asset disposal processes (Cagle, 2003; Olga Kaganova & Nayyar-Stone, 2000).

The need for better manage to the local government owned property is the result of widespread decentralisation initiatives that often have devolved huge property portfolios from central to local governments instantly. At the same time municipal or regional governments were and continue to be unprepared to deal with multiple issues related to the role as property owners and managers. The absence of public asset management framework, as well as its elements, complicates the issue even more. The lack of discussion of public asset management and the recent decentralisation government policy trend creates an important challenge to study the discipline of public asset management further. This paper then is aimed to study practices of public asset management in developed countries, especially the elements of public asset management framework, and to assess its transferability into developing countries.

The paper starts with the summary of literature review, focusing on the elements of public asset management in developed countries, and whether these practices are transferable and applicable to local governments’ public asset management framework in developing countries. It then briefly discusses the method conducted for this research, which used a case study with multiple data collection method. Following the research method, the results of analysis are presented and discussed. Finally, the paper concludes with the findings from this study.

2. LITERATURE REVIEW

This section discusses the experiences of several developing countries in managing their public assets. Those countries are Australia, New Zealand, Canada and France, which are frequently referred and referenced in the area of public asset management reform (Akiko & Gloria, 2005; Amekudzi & McNeil, 2008; Beauchamp, 2009; Cagle, 2003; Conway, 2006; Conway, Kaganova, & McKellar, 2006; Dent, 1997; Dow, Gilles, Nichols, & Polen, 2006; Hanis, Trigunarsyah, & Susilawati, 2010b; Hentschel & Kaganova, 2007; Howard, 2001; Ingo & Elif, 2007; Olga Kaganova & Nayyar-Stone, 2000; McKellar, 2006; Warren, 2006).

According to Conway, Kaganova and McKellar (2006), Australia, Canada, New Zealand, and France are not the only reform governments worthy of study, but they are excellent examples of countries that effectively reformed and applied public

1 Ph.D. candidate at the Faculty of Built Environment and Engineering, Queensland University of Technology.

2 Associate Professor in Project Management, School of Urban Development at the Faculty of Built Environment and Engineering, Queensland University of Technology, Australia.

3 Senior Lecture, School of Urban Development at the Faculty of Built Environment and Engineering, Queensland University of Technology, Australia

Correspondence: Email: m.hanis@student.qut.edu.au, Address: QUT Gardens Point, S Block 11th Floor, Room 1115, Desk 26. 2 George Street, Brisbane, QLD, 4000.

asset management system. Those four countries share similarities in the challenges they faced for managing their public assets particularly real property. However, each challenges required different solutions as appropriate to each country-specific reforms, politics and environment. These four international cases exemplify reforms in public asset management practices in a context from which relevant lessons can be derived and applied to other countries. Moreover, reform paths and solutions used in those countries have certain resemblances, which also can be adopted and applied in other countries with several adjustments.

2.1 Drivers of Reform

A political agenda to control spending, increase productivity, and introduce more effective and efficient management tools throughout central government agencies and departments has driven reforms in real estate asset management in Australia, Canada, France, and New Zealand. The fact that those four countries share this agenda is no coincidence. They faced a looming financial crisis that plagued most G-7 countries in the 1980s, with record-setting national levels of debt as a percentage of gross domestic products (GDP) and year-after-year annual budget deficits that fueled this debt. Quick fixes would not work and the only recourse was major changes in the way government does its business, manages its resources, and delivers its services (Conway, et al., 2006).

The governments in these four countries had accumulated a broad range of public property assets throughout the post-World War II period, for immediate or future service delivery needs. Governments had a propensity to purchase rather than lease, and so they accumulated office buildings, land, facilities, and various types of public buildings. Under existing accounting practices, these assets were written off at the time of acquisition as a charge against the annual capital budget. Property-related operating expenses were usually not traced, and the need for an accurate inventory of what the government actually owned, as well current conditions, escaped un-noticed (Conway, et al., 2006).

When an overall reform was initiated, there were several initiatives at the central government level that had direct implication for real properties and the way they had been traditionally managed. First, there was a need to substantially reduce operating costs, the number of government employees, and the federal payroll to drive down overall expenditures. This need led to an absolute reduction in the amount of space that governments used to deliver existing programs. But reduction alone was not enough. Second, at least in Canada, there was an examination of the role of central government in relation to lower tier governments and reducing central government responsibilities to these lower tier including the space or facilities they required. Third, various departments and agencies were consolidated, central controls were relaxed, and uniformity of standards gave way to increased decentralisation, along with more discretionary powers at the departmental level. Finally, central governments were searching for alternative ways to do business and were willing to consider options to increase efficiency and cost effectiveness (O. Kaganova, Tian, & Undeland, 2001).

New Zealand has been recognised as the most aggressive reformer of those four countries and the first out of the gate. It initiated a radical restructuring of its economy and government in 1984, which continued to 1994. New Zealand's actions mirrored the dire nature of a combined political and economic crisis that hit this country in 1984. Australia followed shortly thereafter, which was driven by the need to increase productivity and competitiveness in response to various reports issued in the early 1980s. Sweeping reforms began in 1986 and escalated in the late

1990s. The process of privatisation in Australia was second in value to the United Kingdom's and second as a share of GDP to New Zealand's. Canada can trace the roots of its reform measures back to 1986, but 1993 was the year in which major restructuring began to take shape. While not as aggressive in its reform measures as New Zealand or Australia, Canada instituted significant policy measures that heralded a new era in the management of federally owned properties. France was not driven as much by the exigencies of political and economic reform; rather, it sought reforms that would fulfill an obligation to improve public services and protect public property interests (O. Kaganova, et al., 2001).

2.2 A Framework for Reform: Elements of public asset management framework

McKellar (2006), Conway et al. (2006) and Davis (2007) pointed out that, with varying degrees of emphasis and not always in the same sequence, there are four key factors essential to any breakthrough to revolutionising the business of managing public assets. The first key factor is information system. Lack of data or incomplete data is a major impediment to launching any reforms. Not knowing exactly what government owns, the occupancy levels associated with each property, property characteristics, operating costs, and maintenance requirements are immense barriers to progress.

It is widely acknowledged that governments at all levels, as well as private sector organisations, large and small, must provide an accurate account of their assets and the condition of those assets in their inventory record. A fundamental requirement for any attempt to manage portfolio assets is an accurate account of the assets. In Canada, this is one task that the Treasury Board Secretariat has vigorously embarked upon on behalf of the government and with a remarkable degree of success (McKellar, 2006). In specific, this is the responsibility of the Real Property and Material Policy Directorate of the Treasury Board Secretary. The purpose of the directory is to maintain a contemporary record of basic information concerning the real property holdings of the Canadian government. Information held in the directory is used to keep the government informed about the scale and major components of its real property inventory. It is also used to provide information to ministers, members of parliament and the general public on a specific property or group of properties within a particular geographic area.

In New Zealand, government departments are required to maintain asset registration for all fixed assets, including state real property. According to the Treasury guidance, an asset register should contain all relevant information on land and buildings. This includes: certificate of title number, location/area/plan, government valuation, zoning of the area where the land or buildings are located, market valuation, improvements, date acquired and how it being acquired, ownership, present use and condition (Dow, et al., 2006). The introduction of generally accepted accounting practice (GAAP) reporting standard has imposed certain inventory requirements on New Zealand government agencies so that they can properly account for their assets. This is particularly important for the capital charge to be accurately assessed.

The second key factor is needs analysis (Kaganova & Nayyar-Stone, 2000, p. 320). In 1993, Canada restructured their cabinet that resulted in a smaller, two-tiered ministry structure to align with community needs. Ministerial portfolios were consolidated and departments merged, central corporate controls were relaxed, and greater reliance was placed on special operating agencies (SOAs). This initiative begun in 1989 to improve the

delivery and cost effectiveness of government services (McKellar, 2006).

In 2000, the Treasury Board of Canada regulated the policy to acquire, manage, and retain real property only to support the delivery of government programs. Within this context, real property must be managed to the maximum economic advantage, to provide adequate facilities for users, and to respect other relevant government policies.

Similarly, the power to acquire land for government purposes rest with Acquiring Authorities New Zealand that have the need for the land, and the financial resources to purchase it. Although departments are permitted to make capital purchases out of their own funds, for the most part, the acquiring authority will have received an appropriation for the purpose of acquiring land (Dow, et al., 2006).

The third key factor is asset life cycle analysis, especially to recognise the costs that involved in the process (Hentschel & Kaganova, 2007, pp. 24-25). There is a broad consensus that the cost of operating and maintaining fixed assets should be recognised and addressed explicitly. Occupancy costs (implied or actual rent) also tend to be recognised, but some countries do not apply this to all publicly owned office space. In all these cases, the advantage is that there is a private market that serves as a reference point (or as the actual provider of the services), so there is a reasonably objective basis for establishing the costs (Conway, et al., 2006).

According to Conway et al. (2006), maintenance costs may seem straightforward. However, there is a consistent concern for the issue of deferred maintenance that the reforms attempt to address by requiring asset managers to develop and implement a maintenance plan and budget. Facility management costs generally are also recognised and addressed, including those provided in house by specialised government institutions.

There is more variation in the approach to recognising and managing the costs associated with the ownership of fixed assets. This includes three separate issues: valuation of the asset, depreciation, and cost of capital (Charles & Alan, 2005; Churchill, 1992; Dent, 1997).

Consistent with the focus on the opportunity cost of holding a fixed asset, most of the countries have instituted a continuing process of identifying assets that are no longer needed or where ownership is no longer justified on economic grounds. In these cases, there is a process for disposing of the assets, usually at or near market prices.

Life cycle costing is not a technique specific to the four countries, but some of them have adopted it as a practical and effective way to manage the costs of asset ownership and use. The technique looks at all phases of ownership of an asset, encompassing acquisition, ownership, and disposal. It includes not just the production or acquisition costs, but also costs to operate and maintain the asset.

The fourth key factor is accountability mechanisms and performance measurement (Ahren & Parida, 2009, p. 249; Carter, Klein, & Day, 1992, p. 35; Imbaruddin, 2003). Accountability involves overall stewardship of assets. This means effective mechanisms to measure results and an accounting system that will drive effective decision-making. Government must be able to hold asset managers accountable for the assets in their custody and be assured that these assets are serving their intended purposes and achieving targeted results (Conway, et al., 2006).

The government entities in New Zealand is obliged to comply with legislation that governing the private sector in its use, development and management of property holdings and to manage its holdings in the same way as any private sector corporation or individual. At the same time, government agencies were subject

to new accountability measures with the introduction of output purchasing agreements at all levels of government.

This introduction of performance measurement directly affected the management of state real property. Specific performance measures related to the use of land are defined as outputs in the contracts and included in some annual departmental forecasts and end-of-year reports, particularly those with large land holdings where land is considered a significant activity or those with statutory responsibilities for land management (Dow, et al., 2006, p. 81).

In general, there are two approaches most frequently used to measure performance of public organisations (Imbaruddin, 2003). The first mode of analysis involves measuring service delivery performance characteristics using data from official archives of public agencies, which sometimes called objective measures. This indicator is used to document such performance criteria as effectiveness, efficiency, and equity of policy inputs, outputs and outcomes. The second measurement type is the subjective performance measurement. This measurement evaluates the performance of government agencies using subjective indicators such as public services users' satisfaction towards the quality of public services delivered by the public entities.

3. RESEARCH METHODOLOGY

In order to achieve the aim of this paper, a case study was selected as the data collection strategy. The case study was conducted to Indonesian local governments. Indonesia is a unitary state with a central government and two levels of autonomous sub-national or local government and administration; provincial and regency or city level. Indonesia's conditions could give a picture of developing countries circumstances in general. South Sulawesi and West Sulawesi provinces were selected because these provinces represent typical Indonesian conditions, especially their population, municipal assets owned by local government and accessibility to the local government organisation (Bureau of Statistics Indonesia, 2006).

The case study uses interviews and a focus group. The interviews were aimed to examine the conditions of local government's public asset management in developing countries. Through interviews, the study suggests the elements of public asset management framework. The result then tested, justified and validated through a focus group with local government officers in developing countries who involve in asset management process, together with practitioners from private sectors, academics scholars, legislative members and public service customers.

Interviews were conducted in late 2009 to the South Sulawesi officers and in early 2010 to the West Sulawesi Province officers. There were 5 participants selected from each Province based on their job responsibilities that related to local government budgeting and public asset management. There were two participants from technical budgeting and public asset management officers, two participants from middle level manager and one participant from decision maker.

The second step is a focus group, which was conducted in June 2010. Before the study concluded on its framework, a validation process conducted in the form of focus group. The participant of the focus group were local government officers from the South Sulawesi Province, who are involved in asset management process, practitioners from private sectors, academics, legislative members, and public service end users in South Sulawesi. Data gathered in the study were analysed qualitatively.

4. RESULTS AND DISCUSSIONS

4.1 Public Asset Management in Indonesia

In order to propose elements that should be incorporated into the Indonesian public asset management framework, current condition of Indonesian local governments need to be examined. From the interviews and a recent study by Hanis, Trigunarsyah and Susilawati (2010a), there are several circumstances in Indonesian local governments that should be recognised in relation to its public asset conditions.

The first condition is the absent of institutional and legal framework. Unclear regulation and working system leads to another problem, i.e. cross jurisdictions in public asset management followed by lack of coordination. Management of public assets is typically conducted by different jurisdictions or bureaucracies depend on who occupy and utilise the assets. It operates with different functioning policies and procedures in various divisions within provincial governments. Different classes of properties, and even individual real property assets, are managed according to divisions' own policies.

In many cases, local governments in Indonesia suffer difficulties in identifying which asset falls in whose jurisdiction, whether it is central government's or local government's jurisdiction or other local government's territory. This condition is mainly caused by a lack of coordination and proper asset documentation. Not only the unclear status of the assets, but also the other information related to the assets such as asset location, physical conditions, vacant or available, asset value that help decision maker in managing the assets, are not available and not recorded well.

As of 2009, only 50 percent of all local authorities or divisions in the South Sulawesi Provincial Government have their property records computerised (South Sulawesi Province Secretary, 2008). There is no reliable up-to-date inventory data on property holdings. It is found that the inventory report has lack of strategic and meaningful data such as property's utilisation, condition, historical significant, and other important information. This, in turn, causes poor decision making related to public asset management.

Practicing asset management requires updating data regularly, which also means increasing the quality of information that made available to community and government stakeholders. In the case of the South Sulawesi Provincial Government, data stored in the asset census reports, is limited only to general information. This information is insufficient be used to support decision-making process, whether the asset needs to be refurbish, maintain, lease, dispose or other significant processes.

The second condition is there is no synchronisation between assets ownership and asset needs in local government organisation. In the selection of asset ownership, local governments have no choice of what asset should be kept and what asset should be disposed. Indonesian Decentralised Act No. 32/2004 and its revision have obliged the local governments to acquired assets from central government despite the local governments needs to deliver public services.

The adoption of an asset needs analysis by local governments can provide a better knowledge of how to align the local government asset to best meet the service delivery needs of their community. Strategic analysis as one of asset management processes aims to identify the direction of the customers' expectations in relation to public service delivery to the community. Consequently, it must ensure the compatibility between current asset portfolio and the public services that local government provides.

Asset life cycle guidance, as the third condition, is also missing in local government asset management framework. The local governments asset life cycle is not inter-related each other. The most stressed issue in the cycle is only on asset procurement. The reason is that at this process corruption frequently took place in the organisation. Although some regulations have mentioned asset planning, procurement, execution, maintenance and disposal process, unfortunately these process are not correlated and supported each other. This indication can be seen from regulation that ruled them are placed in different act or law, and often imposed by different body within the local government organisation.

The fourth condition is non-profit principle applied by local governments in managing public assets. Although the governments of South Sulawesi and West Sulawesi Provinces have been under financial pressure, due to increase public services demand and decrease subsidies from central government, they still treat public assets as free public goods and as non-income generated resources.

They have no systematic measurement of the efficiency of their real estate use or the financial performance of their public properties in order to recognise the profitability of the public assets. Only the capital costs of new public assets were a concern. The government believes that taxpayers fund those assets; therefore it is their rights to get benefit from those assets with no costs.

4.2 The Elements of Public Asset Management and Its Applicability

After pointed out the current condition of Indonesian local governments toward their public asset management, this section discusses the important elements that should be included in the proper asset management framework and its transferability and applicability to Indonesian local governments. Those elements are asset identification, asset needs analysis, asset life cycle guidance and performance measurement as controlling element. These elements were validated by a focus group that captures stakeholders' response to the suggested elements.

Public asset identification

The primary purpose of asset identification and its accompanying components (programs, tasks, or activities) is to help asset managers to: 1) know exactly what assets they have for the purpose of operating, monitoring, and/or maintaining the assets, as some organisations have inherited certain assets that were annexed or may have been previously installed or improved; 2) know precisely where the assets are located, to reduce the time wasted for digging out drawings, searching for documents, or tracking down the last person(s) who worked on the assets in order to locate the assets; 3) know the condition of the assets at any given time, which requires local government organisation to have a system (process or procedure) in place for conducting inspections, preventive maintenance, and/or predictive tasks whenever the opportunity presents itself; 4) understand the design criteria of the assets and how they are properly operated and under what conditions; 5) develop asset maintenance program that ensures that each asset performs reliably when it is needed; and 6) perform all of these activities to optimise the costs of operating the assets and extend their useful life to what was intended for by its initial design and installation.

On the focus group, all participants agree that it is important to collect and store asset information properly. Easy update and access to the assets are also crucial for them. However, it is also agreed that it is difficult to start the process due to quantity and

complexity of the assets. Data related to the assets such as market data, assets' condition is difficult to be collected by local governments officials. Local government officers' capacity and their tools are an important factor in the processes.

Asset needs analysis

Countries in transition, including Indonesia, have been going through a rapid process of redistribution of public asset through decentralisation of government. The major components of this process are devolution of property from the central to local governments, as well as property privatisation and restitution. In many countries, public asset transfers to local governments have outpaced further privatisation and restitution, which leads to an increase property ownership by local governments. This condition resulted in many local governments become the largest property owners in urban areas. The property owned and/or controlled by local governments goes far beyond what is needed to deliver public functions and services.

In selection of asset ownership, local governments should be aware of the type of assets they need to deliver the public services. It is important for them to identify their core businesses. Then, they can categories, which assets are needed and which assets are surplus, and should be alienated. It is also important to identify and categories those assets from their importance and their significant to the community.

According to the focus group participants, it is difficult to implements asset needs analysis at the beginning of decentralisation process where central government transferred majority of its assets to local governments. The reason is because it is mandated by the Decentralisation Act to transfer those assets, despite local governments needs in relation to their core businesses. After the transfer, local governments still experiencing difficulties to dispose the assets due to complicated process involve in the asset disposal. However, all participants are agreed and realised the importance of asset needs analysis in the framework.

Asset life cycle guidance

Experts have stressed that asset management is not a single event but rather a process designed to produce knowledgeable decisions about purchasing, operating, and disposing of assets which known as asset life cycle. Asset life cycle starts from planning, design, procurement, maintain, manage, utilise, and dispose. The determination of asset decision in relation to asset acquisition, valuation, and disposition is very important for government officials. Property decisions should never be made in a vacuum (Olga Kaganova & Nayyar-Stone, 2000).

A well-designed asset management plan spells out a sequence of steps that makes good policy sense. A detailed understanding of the nature, extent, and use of all assets controlled by a government agency is the first step to properly manage the assets. Once an asset is identified and classified as essential or nonessential to an organisation's mission, its performance can be continuously measured while its contribution to that mission is periodically assessed. Nonessential government assets on the other hand should not be carried unless they contribute ongoing benefits or cash. If they do not make positive contributions, decision makers should consider their sale or disposal to divert capital to more productive uses that can help achieve the government's objectives.

Majority of focus group participants argued that asset life cycle is already exist in the current public asset management process. Law and regulation that rule the process is also countless. The only problem is they are not integrated. Each process is

conducted by different organisation in local government entities, which frequently do not communicate or coordinate well among them. The participants also indicate that they need detail and clear guidelines to direct them in managing public assets.

Performance measurement as controlling element

The measurement of performance has become an essential element of the strategic thinking of assets owners and managers. Without having a formal measurement system for performance, it is difficult to plan, control and improve the asset management process.

In the literature, there are two approaches most frequently referred to measure performance of public organisations. The first mode of analysis involves measuring service delivery performance characteristics using data from official archives of public agencies. Sometimes called objective measures, these indicators are used to document such performance criteria as effectiveness, efficiency, and equity of policy inputs, outputs and outcomes. Sometimes closely associated with the production model, the objective performance measurement is arguably the most popular approach used in measuring the organisational performance of public sector agencies. It is argued that efficiency and effectiveness constitute managerial standards of performance, which guide the public organisation in the provision of public services. Since these elements focus on the price and quantity of services delivered, it is in this area that hard data or objective indicators are most useful and most often used, and this is one of the reasons for the popularity of objective performance measurement in the public sector.

The second measurement type is the subjective performance measurement. This measurement evaluates the performance of government agencies using subjective indicators such as public services users' satisfaction towards the quality of public services delivered by the public entities. The increasing pressures on governments around the world to adopt democratic practices in the 1980s made subjective indicators, such as citizen surveys to measure the performance of government agencies, more important. Gathering and publicising public opinions is significant in itself because it reflects the government's adoption of democratic norms. In addition, the process of asking citizens to express their views, as well as their opinions about performance of public organisation 'may have critical behavioral ramifications'. The citizens may be reassured that they are involved in managing public services and that the government is seriously concerned about their views. In an environment where the general public increasingly demands quality services and a client focus, understanding client satisfaction becomes critical and therefore the opinions of clients or public service receivers need seriously to be taken into account.

The focus group participants are quite familiar to quantitative performance measurement. Target and benchmark that measure by efficiency and effectiveness are the most famous terms used in local governments organisations. Unfortunately, qualitative measurement is not as familiar as quantitative measurement. According to participants, local governments rarely ask their stakeholders, including the community, to give response to local government performance in a qualitative form.

5. CONCLUSION

Developed countries such as Australia, Canada, New Zealand, and France are not the only reform governments worthy of study, but they are excellent examples of countries that effectively applied public assets management reform agenda. Those four countries share similarities in the challenges they faced in managing their

public assets. However, they all sought different solutions as appropriate to country-specific conditions. Those four cases exemplify public asset management reform and practices in a context from which relevant lessons can be learned and adapted to other countries.

However, in attempting to transfer the experiences, there should be a clear identification of particular countries conditions of applying the reforms. Since those four countries share a common purpose but have pursued different routes to the same destination, they do offer important lessons that benefit other countries who are pursuing reform for similar reasons. The lessons learned span from public policy to the technicalities of accounting practices. They favour an explicit and clear policy framework; budgets that reflect the true cost of consuming space; effective mechanisms for managing information; accountability mechanisms and measuring results; decentralisation; privatisation, where feasible, of both assets and asset management; and a clear preference for accrual accounting. These lessons learned are instructive but not prescriptive and leave wide latitude for interpretation, variation, and experimentation. In the case of Indonesian local governments, asset identification, asset needs analysis, asset life cycle guidance and performance measurements are important elements that should be incorporated in Indonesian public asset management framework.

REFERENCES

- Ahren, T., & Parida, A. (2009). Maintenance performance indicators (MPIs) for benchmarking the railway infrastructure: A case study. *Benchmarking: An International Journal*, 16(2), 247-258.
- Akiko, T.-H., & Gloria, P. (2005). Experience of crisis-hit asian countries: Do asset management companies increase moral hazard? *Research Paper Series (Philippine Institute for Development Studies)*(1), 1.
- Amekudzi, A. A., & McNeil, S. (2008). *Infrastructure reporting and asset management: Best practices and opportunities* (Transportation & Development Institute (American Society of Civil Engineers). Infrastructure Systems Committee., Trans.). Reston, Va.: American Society of Civil Engineers.
- Beauchamp, T. (2009). Municipalities on the move. *CA Magazine*, 142(7), 49.
- Bureau of Statistics Indonesia. (2006). Public Finance Statistics. Retrieved 26 Novembre 2008, 2008, from <http://www.bps.go.id/sector/pubfin/>
- Cagle, R. F. (2003). Infrastructure asset management: An emerging direction. *AACE International Transactions*, PM21.
- Carter, N., Klein, R., & Day, P. (1992). *How organisations measure success: The use of performance indicators in government*. London ; ; New York: Routledge.
- Charles, A. S., & Alan, C. B. (2005). Asset life cycle management: Towards improving physical asset performance in the process industry. *International Journal of Operations & Production Management*, 25(5/6), 566.
- Churchill, M. (1992). Asset valuation. *Australian Accountant*, 62(3), 35.
- Conway, F. (2006). Federal asset management in Australia. In O. Kaganova & J. McKellar (Eds.), *Managing government property assets: International experiences* (1 ed.). Washington, D.C. 20037: The Urban Institute Press.
- Conway, F., Kaganova, O., & McKellar, J. (2006). A "composit image" of central government asset management reforms. In O. Kaganova & J. McKellar (Eds.), *Managing government property assets: International experiences* (1 ed., pp. 17). Washington, D.C. 20037: The Urban Institute Press.
- Davis, J. (2007). What is asset management and where do you start? *American Water Works Association. Journal*, 99(10), 26.
- Dent, P. (1997). Managing public sector property assets: The valuation issues. *Property Management*, 15(4), 226.
- Dow, P., Gilles, I., Nichols, G., & Polen, S. (2006). New Zealand: State real property asset management. In O. Kaganova & J. McKellar (Eds.), *Managing government property assets: International experiences* (1 ed.). Washington, D.C. 20037: The Urban Institute Press.
- Hanis, M. H., Trigunarsyah, B., & Susilawati, C. (2010a). *Public asset management framework for local governments: Opportunities and challenges for public asset managers*.
- Hanis, M. H., Trigunarsyah, B., & Susilawati, C. (2010b). *The significant of public asset management framework application for Indonesian local governments*.
- Hentschel, J., & Kaganova, O. (2007). Government property resources: A case for asset management. *Public Management (00333611)*, 89(2), 24-26.
- Howard, R. J. (2001). Infrastructure asset management under Australian Accounting Standard 27 (AAS27). *Proceedings of the Institution of Civil Engineers-Municipal Engineer*, 145(4), 305-310.
- Imbaruddin, A. (2003). *Understanding institutional capacity of local government agencies in Indonesia*. The Australian National University, Canberra.
- Ingo, W., & Elif, S. (2007). The asset management industry in asia: Dynamics of growth, structure, and performance. *Financial Markets, Institutions & Instruments*, 16(1), 1.
- Kaganova, O., & Nayyar-Stone, R. (2000). Municipal real property asset management: An overview of world experience, trends and financial. *Journal of Real Estate Portfolio Management*, 6(4), 307.
- Kaganova, O., Tian, V., & Undeland, C. (2001). Learning how to be efficient property owners and accountable governments: The case of Kyrgyzstan's cities. *Public Administration and Development*, 21(4), 333-341.
- McKellar, J. (2006). The management framework for real property - Government of Canada. In O. Kaganova & J. McKellar (Eds.), *Managing government property assets: International experiences* (1 ed.). Washington, D.C. 20037: The Urban Institute Press.
- South Sulawesi Province Secretary. (2008). *Asset census*
- Warren, C. M. J. (2006). *Commercial property asset management in the Australian public sector: Towards best practice procurement*. Unpublished Thesis (Ph D) - University of Queensland, 2006, [St. Lucia, Qld.].